

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A gain-clamped optical amplifier comprising:
optical reflection means installed on an input optical fiber or ~~an output optical fiber~~;
optical anti-reflection means installed on an output ~~the~~ optical fiber opposite to the input optical fiber having the optical reflection means installed on; and
an optical amplifier located between the optical reflection means and the optical anti-reflection means, for amplifying an input signal or ~~an output signal~~, and an optical reflection signal:
wherein an amplified spontaneous emission light emitted from the optical amplifier to the input optical fiber ~~and the output optical fiber~~ is reflected by the optical reflection means installed in the input optical fiber and amplified in the optical amplifier;
wherein the spontaneous emission light inputted to the input optical fiber and reflected by the optical reflection means is in a same direction as the input optical signal; and
wherein a change in the input signal is compensated by the amplified spontaneous emission light such that a gain is constantly maintained regardless of a power level of the input signal.
2. (Original) The gain-clamped optical amplifier of claim 1, wherein the optical reflection means is one or more optical fiber Bragg gratings installed on the input optical fiber or the output optical fiber.

3. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical reflection means is one or more waveguide type Bragg gratings directly engraved on an

input optical waveguide or an output optical waveguide of the optical amplifier.

4. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical reflection means is comprised of a wavelength division multiplexer and a mirror installed at an end of the wavelength division multiplexer.

5. (Original) The gain-clamped optical amplifier of claim 1, wherein the optical anti-reflection means is an isolator.

6. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical anti-reflection means uses an optical fiber having a section of the output optical fiber coated for anti-reflection.

7. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical anti-reflection means uses an optical fiber having a core section of the output optical fiber cut slantingly.

8. (Original) The gain-clamped optical amplifier of claim 1, wherein the optical amplifier is a semiconductor-optical amplifier.

9. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical amplifier is an erbium-doped optical fiber amplifier.

10. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical amplifier is a rare earth ion doped optical fiber amplifier optically pumped.

Application No. 10/720,220
Amendment dated September 22, 2006
Page 4

Claims 11-17 (Canceled)